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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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25X1

COUNTRY Hungary

REPORT

SUBJECT Underwater Military Bridges

DATE DISTR. 21 MAR 1958

25X1

NO. PAGES 1

REFERENCES RD

DATE OF INFO.

PLACE & DATE ACQ.

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

report (with an English translation) concerning the construction and tactical use of underwater bridges by the Hungarian Army. The report includes a description of an underwater bridge and an account of the method of erection and it includes a sketch, with explanatory legend, showing the component parts of such a bridge (assembled). The information ob- 25X1

tained from an official Hungarian Army manual, the Műszaki Utasitas (Engineering Guide). 25X1

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Data pertaining to underwater bridges.

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1./ Reference:

Muszaki Utasitas [the Engineering Guide] deals with the standard underwater bridge in the people's army on page 30 or thereabouts.

This guide is classified Secret (Titkos). It is always in the Secret Office, and it can be taken out only by officers , on their receipt, when they are preparing for some technical drill. These secret regulations can be used only for officer training because the data in them cannot be used to instruct EM.

The exact name of the regulations book is:

MUSZAKI ALAPISMERETEK	TECHNICAL FUNDAMENTALS
a Nephadsereg nem muszaki beosztasu tisztjei szamara.	for officers of the People's Army not in technical assignments.

2./ General data on underwater bridges:

Underwater bridges are built about 30 centimeters under the surface of the water. Thus the bridge is built in such a way as to make enemy discovery difficult and for the same reason it can usually be used permanently.

Otherwise it is set up at the place and time needed for a crossing.

After the troops are across, the engineers -- with suitable help which is provided by the rifle units -- take apart the bridge and carry it forward to the next crossing place.

The bridge is never left standing for a period too long for the material from which it is made.

3./ Technical data:

a) The material for the bridge is wood.

b) Method of erection: underwater divers secure the beams and the piles, which are already pounded down by pile drivers, as shown in the accompanying sketch. The flooring (supporting planks) are fastened to the beams; tie-down ~~fastening~~

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planks are put over these on the two edges and fastened to the piles in order to keep the water from lifting the flooring.

c) Width: 5 meters.

d) It can be used only in water with depths up to 3 meters.

e) Length (height) of piles: 7-8 meters. These are pounded into the water [bed] so that their tops are 40-50 centimeters under the surface of the water.

f) Longitudinal distance between piles ~~from one another~~: 2 meters.

g) The bridge consists of three rows of piles.

h) Each member consists of: 6 piles, 31 cross beams, 20 supporting planks, 2 tie-down planks, and a quantity of bolts.

i) Longest length of bridge: one kilometer. Longer underwater bridges are not constructed.

j) During crossings, and even when there is no crossing, the side edges of the bridge are marked with flags.

k) Load capacity: every vehicle can cross on it; T-34 tanks can follow one another at distances of 15-20 meters when crossing. There is no restriction on lighter vehicles.

The bridge is universally useable until the water rises to more than one meter above the flooring of the bridge. When the water is higher, the T-34's, for example, cannot use it because this type of tank cannot cross water deeper than one meter without causing an exceptional strain on the engine, or engine failure.

4./ Practical demonstration:

Such an underwater bridge was built at the time of the large maneuvers in the fall of 1953 across the Tisza.

The bridge was built near dam keeper's house number 37.

The Minister of Defense (M. Farkas) was personally present at the construction.

The bank of the Tisza was cut down at a slant and the vehicles approached the bridge from the side, then just in front of the bridge they turned onto it.

This bridge was about 200 meters long.

Besides this, such a bridge is built every year at the so-called Methods

Demonstration, but only on dry land. At these times, one member is prepared to demonstrate each phase of construction.

The Methods Demonstrations are held at the Kecskemet Maneuver Area (Kecskemeti Gyakorloter), which lies along the highway leading towards Dunafoldvar.

5./ Notes on use:

1) If necessary, several bridges are built one beside the other, but traffic does not use every bridge in every case; this ~~avoids~~ prevents easy discovery, and if one bridge is discovered and blown up, a stand-by bridge ~~is~~ remains to continue the crossing.

2) ~~It is to be noted especially that~~ the right side of the bridge, in the direction of march, is the stronger; the heavy vehicles cross on this side, and infantry crosses on the left side.

Key to sketch:

1. Merevito kotes -- ~~stiffening bond~~ tie beams.
2. Aszokdeszkak -- ~~supporting planks~~ cross planking.
3. Colopok -- piles.
4. Keresztkotesek -- cross ~~bonds~~ braces.
5. Leszorito deszkak- tie-down planks.

[dot] -- bolts

[cross hatching] -- ~~post~~ section [of pile] ~~pounded~~ driven into the earth.

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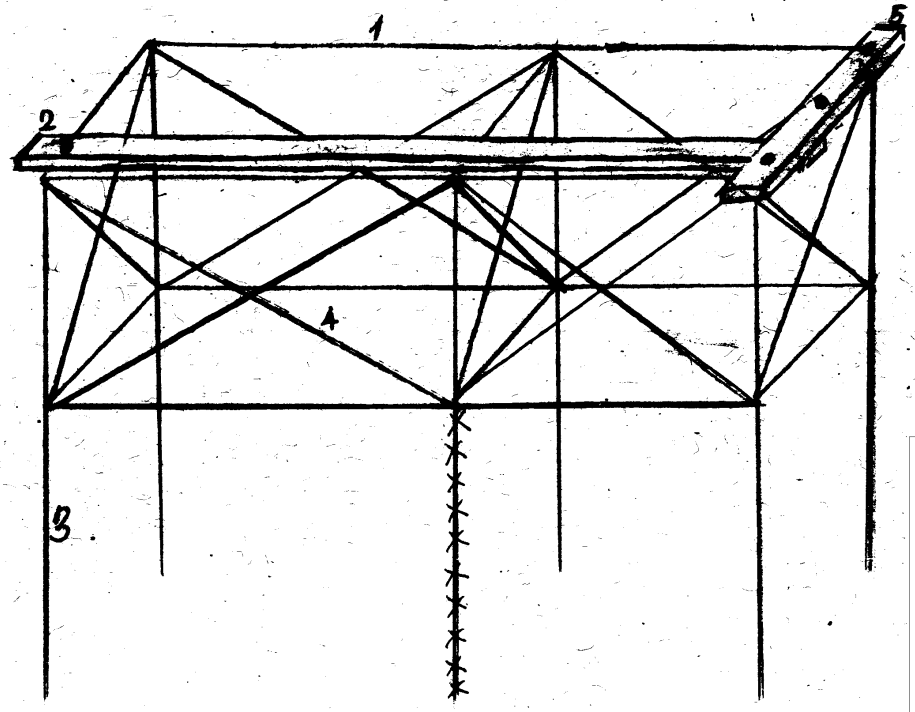
1 ▬ = Merevítő kötés
2 ▬ = Aszokdeszkák
3 ▬ = Cölöpök
4 ▬ = Keresztkötések
5 ▬ = Koszorító deszkák
● = Csavarok

= A cölöpök földbevert része



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